Predicted Signal Contours:

41 17 41 - CH 220 - Defiance, OH
84 23 24 - P.B.F.O.N.W.O.

ERP = 6 kW, 7.782 dBk FM - 2-6 Tables

Radial	HAAT	kW	dBk	Field	60 dBu.5
0 Degs.	94.5M	5.350	7.284	0.944	26.8
10 Degs.	94.5M	6.000	7.782	1.000	27.5
20 Degs.	90.7M	6.000	7.782	1.000	27.0
30 Degs.	88.4M	6.000	7.782	1.000	26.7
40 Degs.	87.4M	6.000	7.782	1.000	26.5
50 Degs.	89.0M	6.000	7.782	1.000	26.8
60 Degs.	93.8M	6.000	7.782	1.000	27.4
70 Degs.	94.5M	6.000	7.782	1.000	27.5
80 Degs.	95.5M	6.000	7.782	1.000	27.7
90 Degs.	99.5M	6.000	7.782	1.000	28.2
100 Degs.	94.1M	6.000	7.782	1.000	27.5
110 Degs.	91.5M	6.000	7.782	1.000	27.1
120 Degs.	88.6M	6.000	7.782	1.000	26.7
130 Degs.	88.4M	6.000	7.782	1.000	26.7
140 Degs.	90.0M	6.000	7.782	1.000	26.9
150 Degs.	90.7M	6.000	7.782	1.000	27.0
160 Degs.	92.1M	6.000	7.782	1.000	27.2
170 Degs.	93.2M	6.000	7.782	1.000	27.4
180 Degs.	94.5M	6.000	7.782	1.000	27.5
190 Degs.	94.5M	6.000	7.782	1.000	27.5
200 Degs.	94.5M	6.000	7.782	1.000	27.5
210 Degs.	94.5M	6.000	7.782	1.000	27.5
220 Degs.	94.5M	6.000	7.782	1.000	27.5
230 Degs.	94.5M	6.000	7.782	1.000	27.5
240 Degs.	94.5M	5.350	7.284	0.944	26.8
250 Degs.	94.5M	3.376	5.284	0.750	24.2
260 Degs.	94.5M	2.130	3.284	0.596	21.8
270 Degs.	94.5M	1.344	1.284	0.473	19.5
280 Degs.	94.5M	1.000	0.000	0.408	18.0
290 Degs.	94.5M	0.794	-1.000	0.364	16.9
300 Degs.	94.5M	0.676	-1.700	0.336	16.2
310 Degs.	94.5M	0.794	-1.000	0.364	16.9
320 Degs.	94.5M	1.000	0.000	0.408	18.0
330 Degs.	94.5M	1.344	1.284	0.473	19.5
340 Degs.	94.5M	2.130	3.284	0.596	21.8
350 Degs.	94.5M	3.376	5.284	0.750	24.2

Ave. HAAT= 93.2M, Ant. COR= 307.9M AMSL

Statement of qualifications of the preparer:

I, Doug Vernier, declare that I have studied engineering at the University of Michigan and have received degrees from the University in Broadcast Telecommunications. That I have been active in broadcast consulting for over 20 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985 this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana.

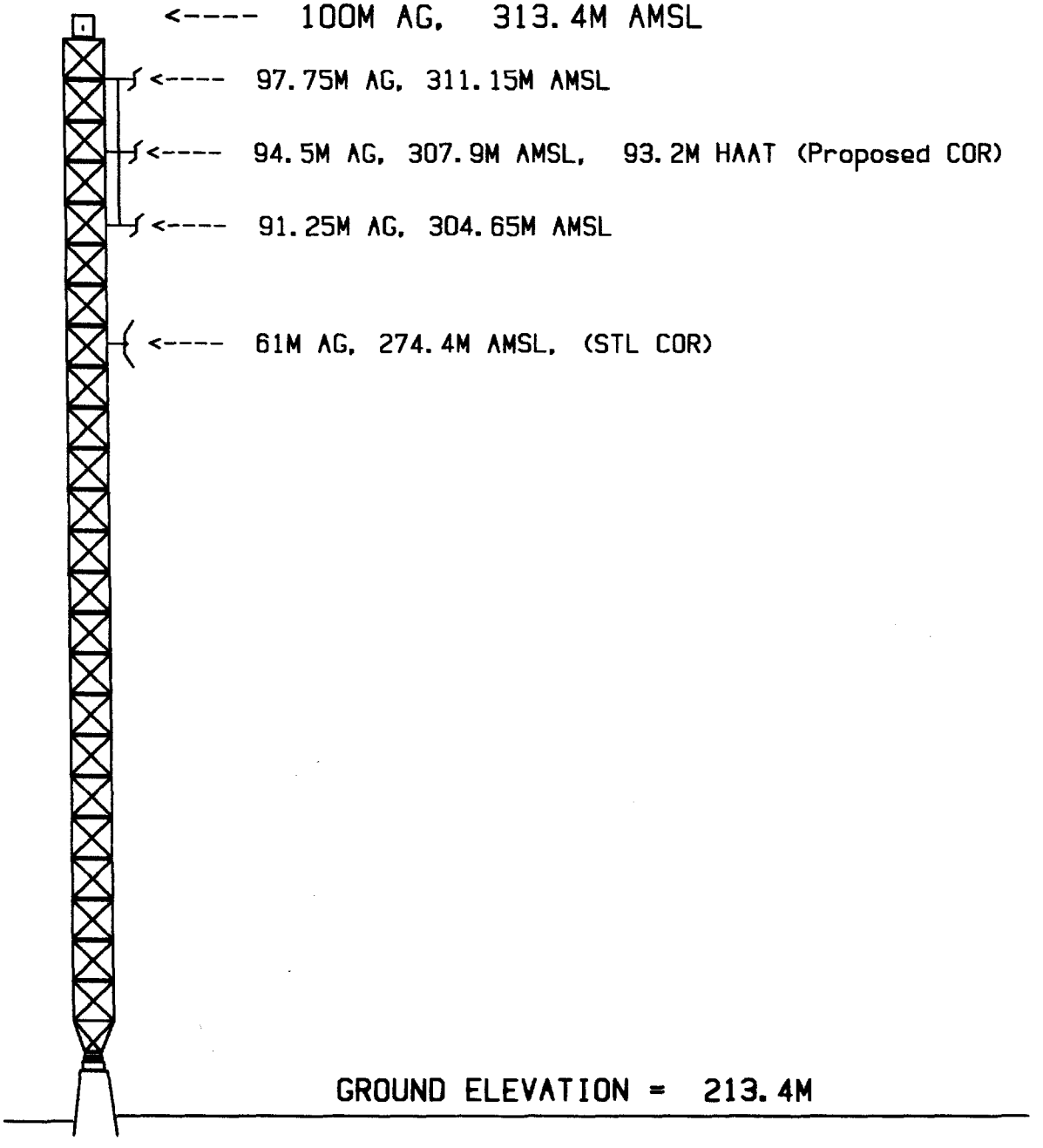
That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by the Public Broadcasting Foundation of Northwest Ohio, Toledo, Ohio to prepare the engineering showings and the technical exhibits appended hereto;

That, I do swear that the technical information contained in same and the facts stated therein are true of my knowledge.

Douglas L. Vernier

January 31, 1995



VERTICAL SKETCH

N. Lat. 41 17 41
W. Lng. 84 23 24

Steel guyed tower - A3

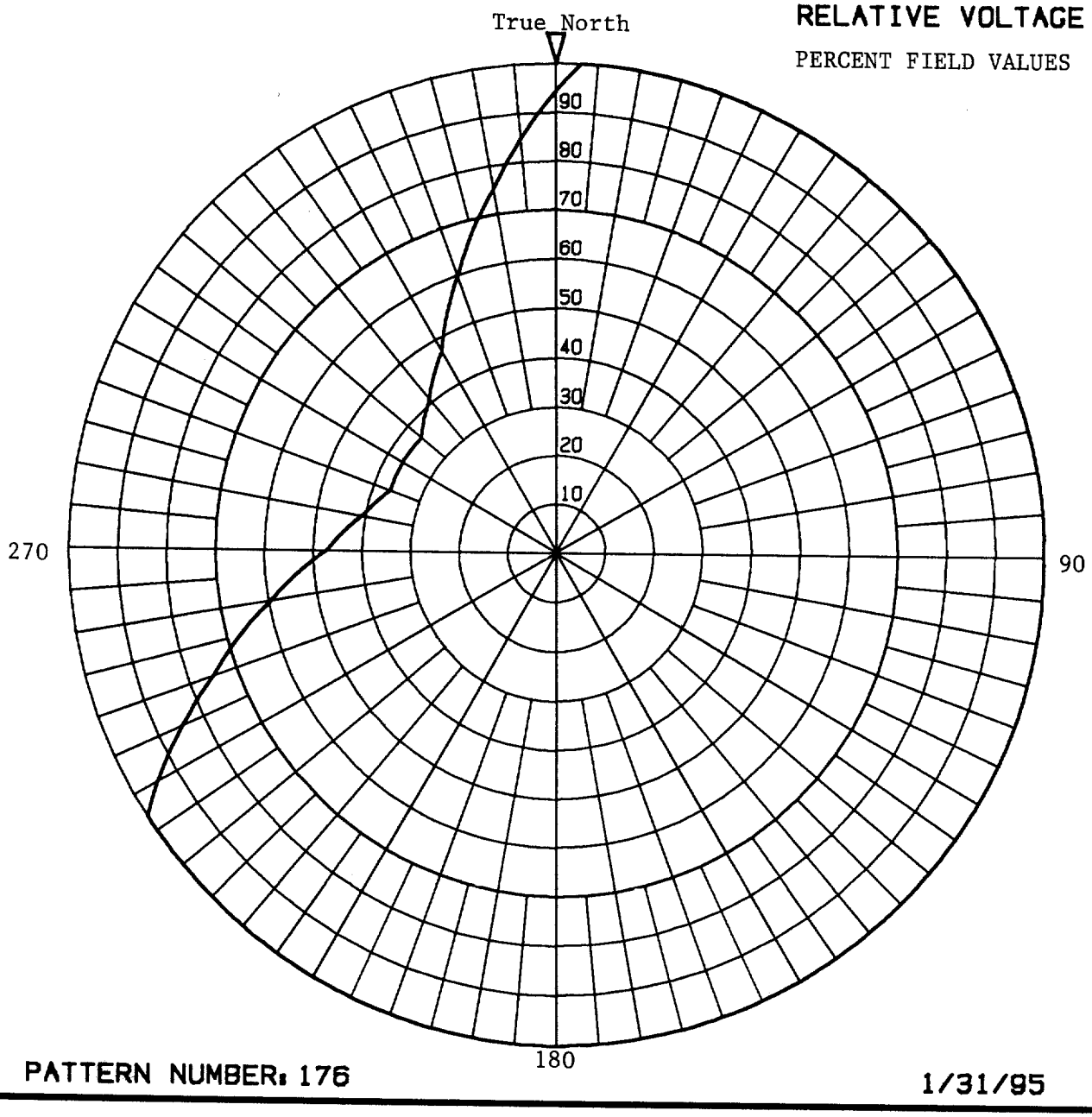
(Not to Scale)

EXHIBIT #E2

CH 220 - 6 kW DA
93.2 M HAAT
Public Broadcasting
Foundation of N.W. Ohio
Jan. 1995

DOUG VERNIER
BROADCAST CONSULTANT
1600 PICTURESQUE DR.
CEDAR FALLS, IA 50613
319 266-8402

Exhibit #E3



Public Broadcasting Foundation of North West Ohio

Maximum Power = 6 kW
DIRECTIONAL CUSTOM COMPOSITE PATTERN

Doug Vernier - Telecommunications Consultants
1600 Picturesque Dr.
Cedar Falls, IA 50613

319 266-8402

Pattern #176

Public Broadcasting Foundation of North West Ohio

Maximum Power = 6 kW
DIRECTIONAL CUSTOM COMPOSITE PATTERN

Doug Vernier - Telecommunications Consultants
1600 Picturesque Dr.
Cedar Falls, IA 50613

319 266-8402

Azimuth	Relative Voltage	dBK	ERP
0	0.944	7.3	5.35kw
5	1.000	7.8	6.00kw
10	1.000	7.8	6.00kw
15	1.000	7.8	6.00kw
20	1.000	7.8	6.00kw
25	1.000	7.8	6.00kw
30	1.000	7.8	6.00kw
35	1.000	7.8	6.00kw
40	1.000	7.8	6.00kw
45	1.000	7.8	6.00kw
50	1.000	7.8	6.00kw
55	1.000	7.8	6.00kw
60	1.000	7.8	6.00kw
65	1.000	7.8	6.00kw
70	1.000	7.8	6.00kw
75	1.000	7.8	6.00kw
80	1.000	7.8	6.00kw
85	1.000	7.8	6.00kw
90	1.000	7.8	6.00kw
95	1.000	7.8	6.00kw
100	1.000	7.8	6.00kw
105	1.000	7.8	6.00kw
110	1.000	7.8	6.00kw
115	1.000	7.8	6.00kw
120	1.000	7.8	6.00kw
125	1.000	7.8	6.00kw
130	1.000	7.8	6.00kw
135	1.000	7.8	6.00kw
140	1.000	7.8	6.00kw
145	1.000	7.8	6.00kw
150	1.000	7.8	6.00kw
155	1.000	7.8	6.00kw
160	1.000	7.8	6.00kw
165	1.000	7.8	6.00kw
170	1.000	7.8	6.00kw
175	1.000	7.8	6.00kw

Pattern #176

Public Broadcasting Foundation of North West Ohio

Maximum Power = 6 kW
DIRECTIONAL CUSTOM COMPOSITE PATTERN

Doug Vernier - Telecommunications Consultants
1600 Picturesque Dr.
Cedar Falls, IA 50613

319 266-8402

Azimuth	Relative Voltage	dBK	ERP
180	1.000	7.8	6.00kw
185	1.000	7.8	6.00kw
190	1.000	7.8	6.00kw
195	1.000	7.8	6.00kw
200	1.000	7.8	6.00kw
205	1.000	7.8	6.00kw
210	1.000	7.8	6.00kw
215	1.000	7.8	6.00kw
220	1.000	7.8	6.00kw
225	1.000	7.8	6.00kw
230	1.000	7.8	6.00kw
235	1.000	7.8	6.00kw
240	0.944	7.3	5.35kw
245	0.847	6.3	4.30kw
250	0.750	5.3	3.38kw
255	0.673	4.3	2.72kw
260	0.596	3.3	2.13kw
265	0.535	2.3	1.71kw
270	0.473	1.3	1.34kw
275	0.440	0.7	1.16kw
280	0.408	-0.0	999w
285	0.386	-0.5	894w
290	0.364	-1.0	795w
295	0.365	-1.0	799w
300	0.366	-0.9	804w
305	0.365	-1.0	799w
310	0.364	-1.0	795w
315	0.386	-0.5	894w
320	0.408	-0.0	999w
325	0.440	0.7	1.16kw
330	0.473	1.3	1.34kw
335	0.535	2.3	1.71kw
340	0.596	3.3	2.13kw
345	0.673	4.3	2.72kw
350	0.750	5.3	3.38kw
355	0.847	6.3	4.30kw

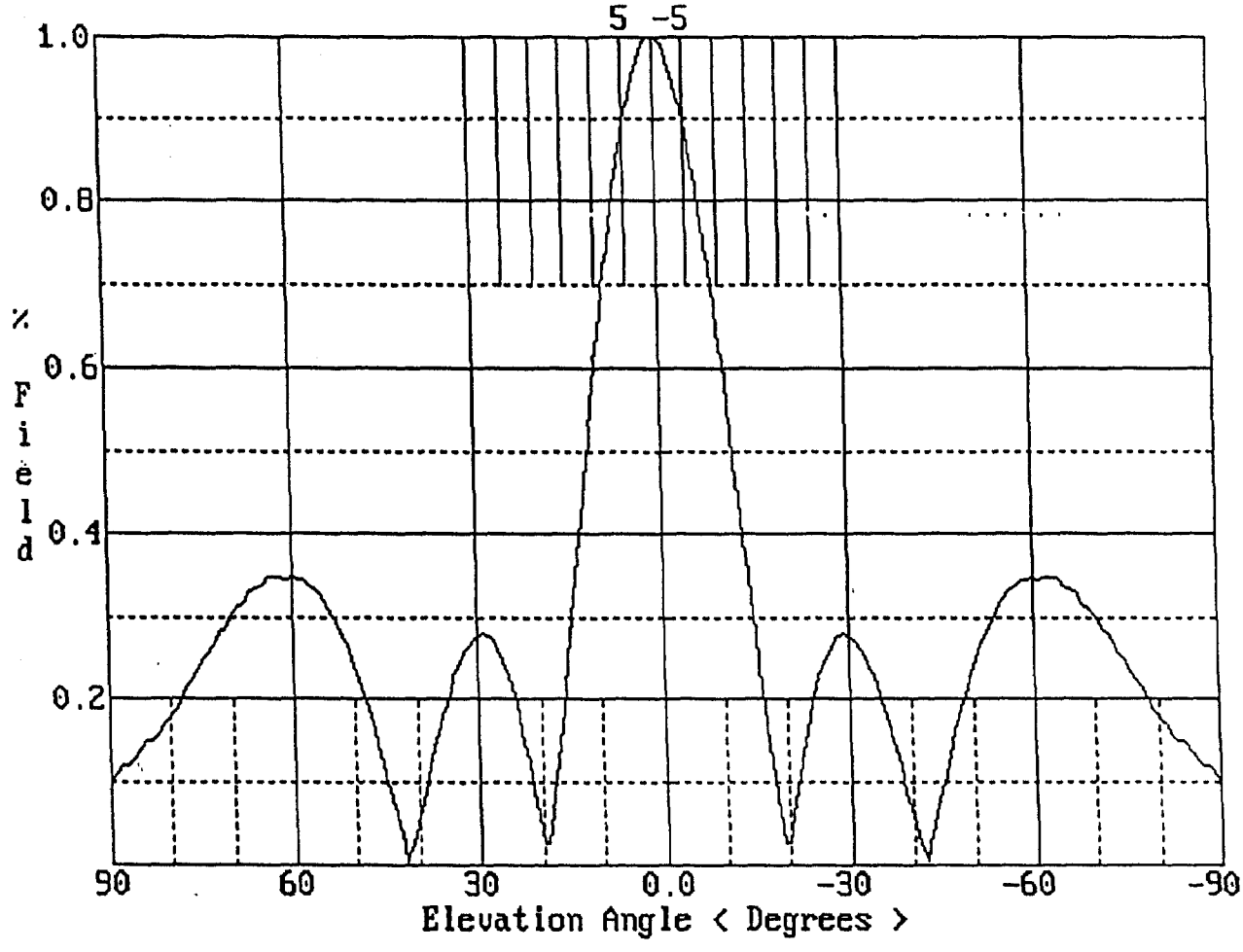
JAMPRO ANTENNAS, INC.
6340 Sky Creek Drive, Sacramento, California 95828
P.O. Box 292880, Sacramento, California 95829-2880
(916) 383-1177 FAX (916) 383-1182

JAMPRO ANTENNAS INC.

Bays : 3

ELEVATION PATTERN

Spacing (Wavelength): 1.00



JAMPRO ANTENNAS INC.

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TABLE OF FIELD STRENGTH FOR : JHPC3.PMT

INCREMENTAL DEGREES

		0	1	2	3	4	5	6	7	8	9
	+	1.000	.996	.984	.955	.928	.893	.853	.798	.746	.689
	-	1.000	.996	.984	.955	.928	.893	.853	.798	.746	.689
D	-10	.628	.558	.487	.420	.349	.279	.213	.147	.085	.026
E	-20	.028	.078	.123	.162	.195	.225	.247	.263	.276	.281
G	-30	.280	.274	.260	.246	.227	.203	.178	.151	.120	.090
R	-40	.059	.026	.006	.038	.070	.101	.132	.161	.189	.215
E	-50	.240	.259	.280	.294	.310	.319	.332	.336	.345	.345
E	-60	.350	.346	.348	.348	.348	.337	.334	.331	.317	.311
S	-70	.305	.288	.281	.263	.255	.246	.227	.218	.209	.189
	-80	.179	.170	.160	.150	.150	.140	.130	.120	.120	.110
	-90	.100									

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6340 Sky Creek Drive, Sacramento, California 95828
P.O. Box 292880, Sacramento, California 95829-2880
(916) 383-1177 FAX (916) 383-1182

CIRCULARLY POLARIZED DIRECTIONAL FM ANTENNA

ANTENNA MODEL:

PATTERN ENVELOPE

JAMPRO proposes to custom build and directionalize a standard FM side mount antenna to meet this stations needs. The final patterns of the HPOL and VPOL will remain within the given pattern envelope.

DESCRIPTION OF TEST

JAMPRO will build or utilize an exact duplicate of the support structure for testing, paying close attention to details, such as including other structures present, such as climbing steps, feed lines etc.

JAMPRO will perform all testing in full scale on our full scale test range. **JAMPRO** will add parasitic's to the environment to manipulate the pattern to meet all requirements. All brackets and parasitic's will be hot dipped galvanized steel to ensure good contact and long life.

JAMPRO will provide a final certification and complete installation drawings of the system when all work is completed. Customer is instructed to follow all mounting instructions and have a licensed surveyor verify the heading of the antenna boom.

All testing will be under the direct supervision of Eric Dye, **JAMPRO's** full time staff engineer. He holds a Masters of Science Degree in Electrical Engineering, and has been developing and designing directional FM arrays for over 5 years.

RULE COMPLIANCE

JAMPRO will comply with all known FCC rules including those stated directly on the stations construction permit. The rules include the following:

The licensed ERP will not be exceeded at any heading

The rms of the Vpol will not exceed the rms of the Hpol.

The maximum to minimum signal will not exceed 15 dB

JAMPRO will attempt to fill the 85% rms requirement

JAMPRO ANTENNAS, INC.
8340 Sky Creek Drive, Sacramento, California 95828
P.O. Box 292880, Sacramento, California 95829-2880
(916) 383-1177 FAX (916) 383-1182

MOUNTING CONSIDERATIONS

JAMPRO instructs that no other antennas are mounted within the appeture of the directional array. A minimum vertical spacing of 10' should be kept for antennas mounted on the same mounting structure. The tower and all cables, steps, etc should be properly RF grounded.

Since directional antenna systems include parasitic reflectors and special bracketing, standard weights and windloads should not be used. Contact JAMPRO for estimated weights and windloads on this antenna.

CONCLUSION

JAMPRO ANTENNAS, INC. carefully follows sound engineering principles in all aspects of developing an FM directional antenna. Over 35 years of experience goes into the design of each system. The customer or his engineer are welcome to be on site during the testing, contact factory for scheduling.

Exhibit #E4

REQUEST FOR WAIVER

The Public Broadcasting Foundation of Northwest Ohio requests a waiver of 47 C.F.R. Section 73.1125 in order to use the existing studio location of WGTE-FM in Toledo, Ohio as the main studio location of the proposed station in Defiance, Ohio. This would locate the main studio outside the proposed station's principal community contour.

The justification for this request is that the Defiance community and surrounding area's population is too small to support a fully-staffed and independently programmed 24-hour public radio station, but sufficiently large to support an economical satellite public radio transmitter. The programming will be delivered to the Defiance station through an intercity microwave relay system. This includes the ability to insert local programming as warranted into the Defiance station's broadcast. A remote broadcast pickup system and vehicle is already available for local program origination.

The Public Broadcasting Foundation of Northwest Ohio regularly assesses community needs and problems through the analysis of audience mail, telephone response and inquiries, content of public service announcements, informal surveys, Community Advisory Board meeting and careful attention to local news media coverage from divergent sources and viewpoints. A member of our Board of Trustees is also a Defiance area native and has provided invaluable assistance in strengthening community ties and moving this project forward. The Foundation will maintain a toll free wats line that is available to the Defiance community.

Although the main studio location of the proposed Defiance station is outside the principal community contour, the Foundation believes it has the experience, resources, and firm commitment to provide a comparable or better level of service to the community as would a local main studio facility.

EXHIBIT #E5
Intermodulation Interference

January 1995

Concerning the Application of
the Public Broadcasting Foundation of Northwest Ohio

Defiance, Ohio

The 115 dBu blanketing contour of the proposed facility falls within 965 meters from the proposed 6.0 kW directional antenna in its maximum lobe. The area within this contour is predominantly rural. There is a cable head-end within ten kilometers but outside the blanketing contour. Little no blanketing interference is anticipated.

There are no TV or LPTV stations within 10 kilometers of the proposed facility.

There is one FM station within ten kilometers:

WZOM	CH 290A	Defiance, OH	3.0 kW	100M	8.04 km	172 Deg T.
WZOM (CP)	CH 289A	Defiance, OH	6.0 kW	100M	8.04 km	172 Deg T.

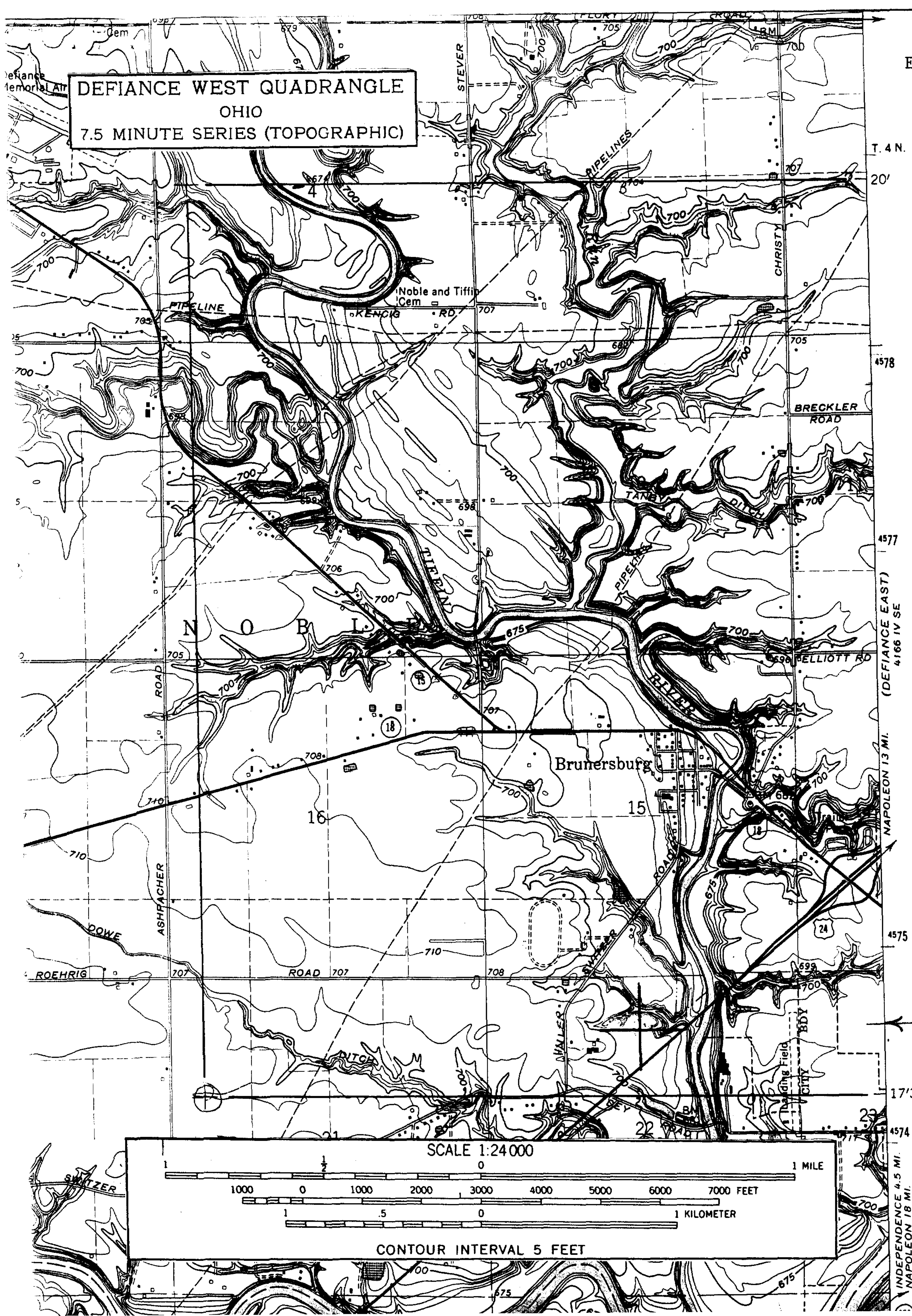
There is a directional AM station within ten kilometers:

WONW Defiance, OH 1280 kHz, 1 kW D, .5 kW N

Since the directional AM station is within 2 miles from the proposed FM tower site, the Public Broadcasting Foundation of Northwest Ohio understands its obligations under the rules to cover the cost of a pattern performance proof (and corrective action if necessary) to establish the integrity of the AM station's pattern after the proposed tower is erected.

The Public Broadcasting Foundation of Northwest Ohio is also aware of its responsibility under the rules to correct objectionable blanketing and intermodulation interference by the use of filters or other means, at its own expense, within the period of one year from commencement of broadcasting from the proposed transmitter site.

Ex #E6


DEFIANCE WEST QUADRANGLE
OHIO
7.5 MINUTE SERIES (TOPOGRAPHIC)
SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
CONTOUR INTERVAL 5 FEET
Noble and Tiffin Cem
KENCIG RD
PIPELINE
PIPELINES
STEVER
CHRISTY
BRECKLER ROAD
TANBY DITCH
TIFFIN RIVER
ELLIOTT RD
Brunersburg
N O B L E
ASHPACHER ROAD
DOWE DITCH
ROEHRIG ROAD
SWITZER
WALLER
Landing Field
CITY BDY
T. 4 N.
20′
17′30″
4578
4577
4575
4574
(DEFIANCE EAST) 4166 IV SE
NAPOLEON 13 MI.
INDEPENDENCE 4.5 MI. NAPOLEON 18 MI.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL SURVEY

DEFIANCE WEST QUADRANGLE
OHIO
7.5 MINUTE SERIES (TOPOGRAPHIC)

SCALE 1:24000
CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Culture and drainage in part compiled from aerial photographs taken 1959. Topography by planetable surveys 1959–1960

Polyconic projection. 1927 North American datum
10,000-foot grid based on Ohio coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks, zone 16, shown in blue

Red tint indicates area in which only landmark buildings are shown

Entire area lies within Congress Lands
Land lines based on the First Principal Meridian

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

Map photoinspected 1977
No major culture or drainage changes observed

UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Revisions shown in purple compiled in cooperation with State of Ohio agencies from aerial photographs taken 1971. This information not field checked

Purple tint indicates extension of urban areas

ROAD CLASSIFICATION
Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U. S. Route — State Route

DEFIANCE WEST, OHIO

N4115—W8422.5/7.5
PHOTOINSPECTED 1977
1960
PHOTOREVISED 1971
AMS 4166 IV SW—SERIES V852

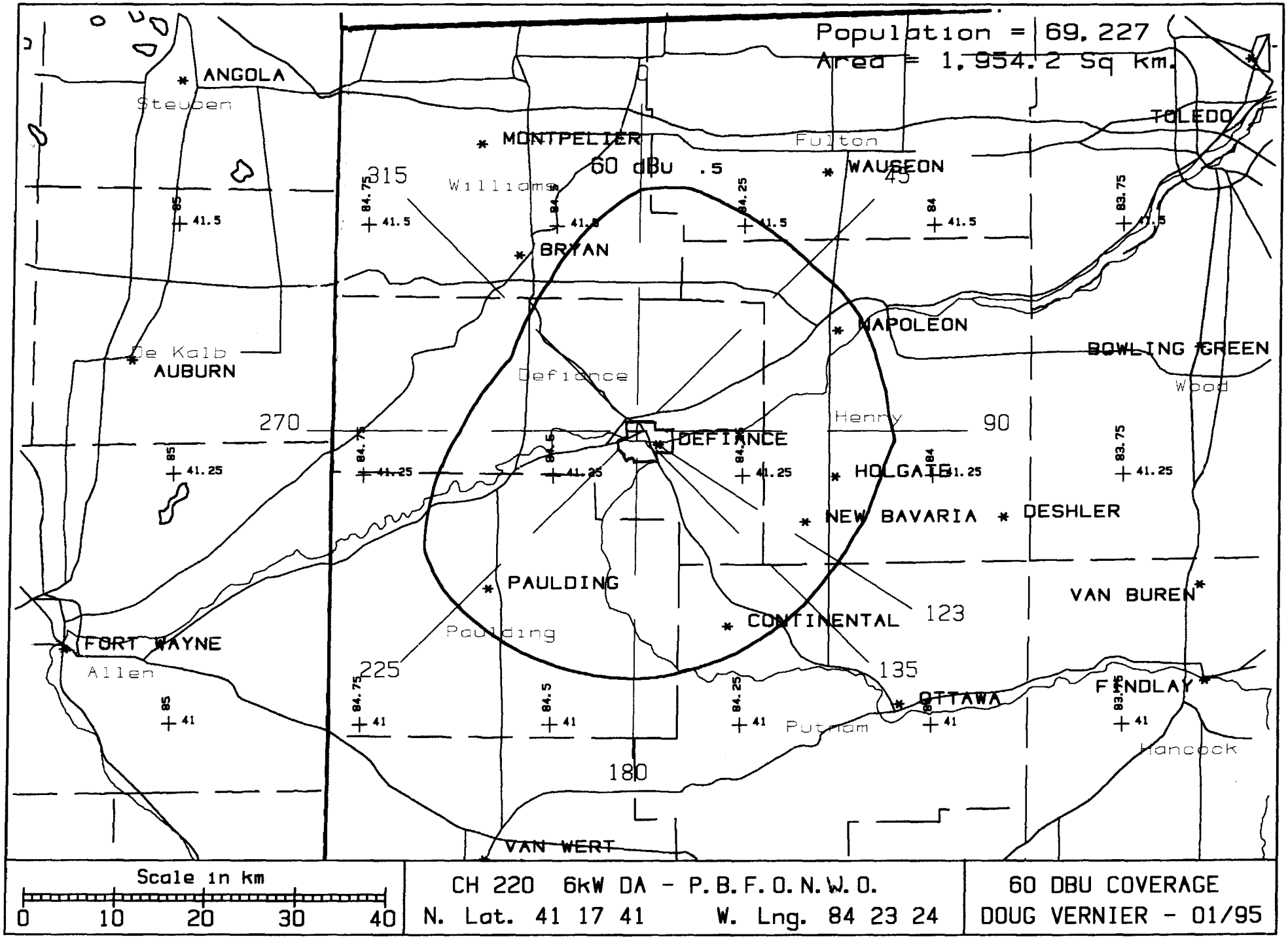

Population = 69,227
Area = 1,954.2 Sq km.
60 dBu .5
ANGOLA
Steuben
MONTPELIER
Fulton
TOLEDO
WAUSEON
Williams
BRYAN
NAPOLEON
BOWLING GREEN
Wood
De Kalb
AUBURN
Defiance
Henry
DEFIANCE
HOLGATE
NEW BAVARIA
DESHLER
PAULDING
Paulding
CONTINENTAL
VAN BUREN
FORT WAYNE
Allen
OTTAWA
FINDLAY
Putnam
Hancock
VAN WERT
315
45
270
90
225
135
180
123
Scale in km
0 10 20 30 40
CH 220 6kW DA - P.B.F.O.N.W.O.
N. Lat. 41 17 41 W. Lng. 84 23 24
60 DBU COVERAGE
DOUG VERNIER - 01/95

Exhibit #E7

Exhibit #E8
Allocation Study

01-31-1995 DOUG VERNIER 319 266-8402

CH# 220A - 91.9 MHz
Public Broadcasting Foundation of N.W. Ohio
INTERFERENCE CHECKS WITH TBA, DEFIANCE, OH at N. LAT. 41 17 41 W. LNG. 84 23 24
PWR = 6 kW DA H.A.A.T. = 93.2 M C.O.R. = 308 M AMSL
Protected F(50-50) 60 dBu = 27.37 km
F(50-10) 40 dBu = 85.5 54 dBu = 42.29 80 dBu = 8.77 100 dBu = 2.67
F(50-10) 37 dBu = 97.06 51 dBu = 50.19 77 dBu = 10.42 97 dBu = 3.21
F(50-10) 34 dBu = 111.35 48 dBu = 58.32 74 dBu = 12.3 94 dBu = 3.87

CH# CALL / CITY	TYPE / STATE	* IN * / LICENSEE	* OUT *	BEARING / <---	DISTANCE	LAT. / LNG.	PWR(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / FILE #
217B WGTEFM	LI	CN 56.8	34.8	62.9	89.60 km	41 39 27	13.50	5.46	52.12
Toledo	OH	Public B/C Foundation of N		242.9	55.67 Mi	83 25 55	289.0	470	BLED890123KE
219B WJOM *	LI	CN 5.0	21.4	17.5	129.65 km	42 24 24	93.00	97.49	66.25
Ann Arbor	MI	The Regents of the Univ. o		197.5	80.56 Mi	83 54 54	234.5*	513	BLED800527AI
FCC Comment > SPEC. NGTED, SHORT-SPACED ALLOC. - GRANDFATHERED 93KW @ 238M.									
> Reference HAAT at 17.5 degrees = 92 M, Pwr.= 6 kW, Pro. contour = 27.2 km, Int. contour = 42.03 km									
220A WVSH *	LI	HN 36.6	7.2	244.9	104.22 km	40 53 32	0.92	40.07	11.27
Huntington	IN	Huntington County Communit		64.9	64.76 Mi	85 30 38	39.3*	279	BLED774
> Reference HAAT at 244.9 degrees = 94.6 M, Pwr.= 6 kW, Pro. contour = 27.56 km, Int. contour = 85.74 km									
220A WQKO.C*	CP	ZCN 0.7	12.3	296.5	89.61 km	41 38 59	3.00	72.49	22.07
Howe	IN	Maranatha Christian Fellow		116.5	55.68 Mi	85 21 12	82.6*	375	BPED910320MA
FCC Comment > Proposed to Canada as B1 on 911220-Accepted by Canada 920214									
> Reference HAAT at 296.5 degrees = 94.6 M, Pwr.= .7163853 kW, Pro. contour = 16.45 km, Int. contour = 55.22 km									
221A WCSRFM	LI	CN 72.0 R	1.3 M	343.9	73.27 km	41 55 41	6.00	36.87	24.38
Hillsdale	MI	WCSR, Inc.		163.9	45.53 Mi	84 38 10	74.0	411	BLH910918KB
FCC Comment > Class B1 with respect to Canada-Accepted by Canada 901108									
221A WZOQ	LI	CN 72.0 R	2.7 M	161.9	74.66 km	40 39 20	3.00	35.97	23.95
Wapakoneta	OH	WZOQ, Inc.		341.9	46.39 Mi	84 06 54	100.0	378	BLH850510KC
FCC Comment > Accepted by Canada on 931004									
222A WFWI	LI	CN 31.0 R	39.8 M	253.1	70.76 km	41 06 25	3.80	8.98	28.10
Fort Wayne	IN	Edgewater Radio, Inc.		73.1	43.97 Mi	85 11 46	123.0	373	BLH930312KD
222A WFWI.C	CP	CN 31.0 R	39.8 M	253.1	70.76 km	41 06 25	2.70	9.06	28.15
Fort Wayne	IN	Edgewater Radio, Inc.		73.1	43.97 Mi	85 11 46	147.0	398	BPH930416IA
223B WVKS	LI	CN 69.0 R	2.6 M	68.1	71.61 km	41 31 55	50.00	5.87	64.41
Toledo	OH	Noble Broadcast of Toledo,		248.1	44.50 Mi	83 35 37	146.0	340	BLH5928

I.F. RELATIONSHIPS: NONE FOUND
Nearest CH 6 Grade B =WLNSTV at 50.66 km, Distance= 154.67 Azimuth = .4 Deg. T.

* Uses actual antenna radial HAAT and power toward reference

HOW TO READ THE FM COMPUTER PRINT-OUT

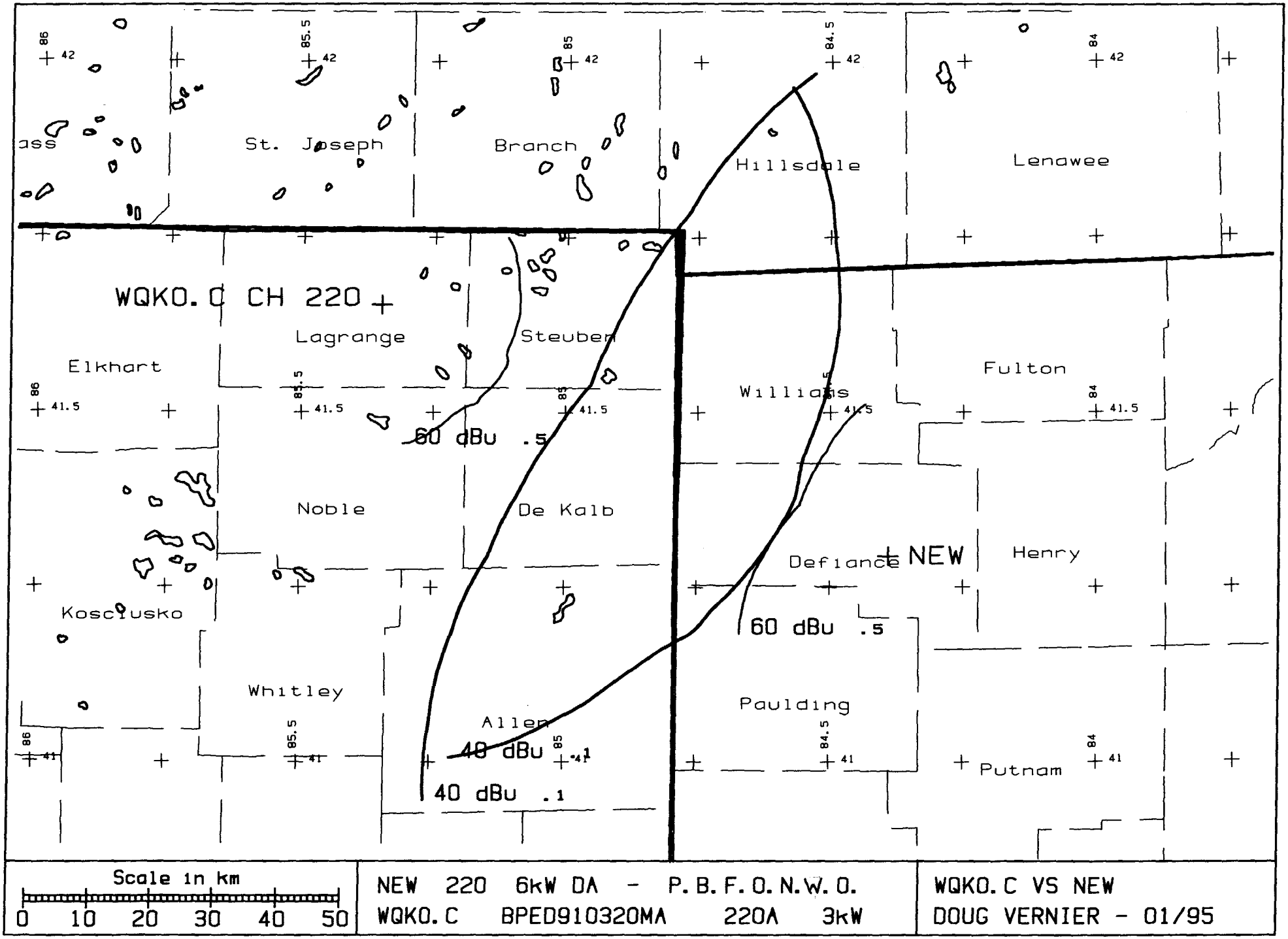
The computer print-out should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table, while the 40, 54, 80 and 100 dBu contours are interference contours derived from the Commission's F(50-10) table. Contour distances are in kilometers and are predicted using spline interpolation from data points identical to those published in Report No. RS 76-01 by Gary C. Kalagian. Critical contour distances are determined using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

The column listed "* IN *" is the sum of the reference station's 60 dBu protected contour and the data file station's interference contour subtracted from the distance between the stations. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, the column is a measure of incoming interference. Negative distances in this column indicate the presence of interference. Listed antenna heights are the average heights of eight standard radials as found in the Commission's records unless otherwise noted, in which case the specific antenna heights along the azimuths between the reference station and the database station are used and visa versa. The column labeled "* OUT *" shows the distance of kilometers of overlap or clearance between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing interference.

Under the "BEARING" column, the first row of numbers indicate the bearings from true north of the data base stations in relationship with the reference station, while the numbers in the second row indicate the reverse bearings from the database station to the reference station.

The columns labeled "INT" and "PRO" hold the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships the "IN" and "OUT" columns change their significance. The letter "R" stands for the minimum required distance in kilometers, while the letter "M" in the next column follows the available clear space separation in kilometers or "Margin". This same procedure is used for all Canadian and Mexican spacing. Minimum separation distances were taken from Sec 73.207 of the rules as amended. Canadian separation distances were derived from the "Canadian/American Working Agreement". The first three letters of the "TYPE" column identify the current F.C.C. status of the stations. The fourth letter will be a "D" or "Z" (Sec. 73.215) if the facility is directional. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt.


ass
St. Joseph
Branch
Hillsdale
Lenawee
WQKO. C CH 220
Lagrange
Steuben
Elkhart
Williams
Fulton
60 dBu .5
Noble
De Kalb
Defiance
NEW
Henry
Kosciusko
60 dBu .5
Whitley
Paulding
Allen
40 dBu .1
Putnam
Scale in km
0 10 20 30 40 50
NEW 220 6kW DA - P.B.F.O.N.W.O.
WQKO. C BPED910320MA 220A 3kW
WQKO. C VS NEW
DOUG VERNIER - 01/95

Ex #E8, Pg # 3

DOUG VERNIER - BROADCAST CONSULTANT
01-31-1995

NEW
Channel= 220
Max ERP = 6 kW
RCAMSL = 307.85 M
N. Lat = 411741
W. Lng = 842324

WQKO.C BPED910320MA
Channel = 220
Max ERP = 3 kW
RCAMSL = 375 M
N. Lat = 413859
W. Lng = 852112

Protected
60 dBu

Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
260.0	2.130	94.5	21.8	126.1	3.000	80.8	73.2	39.7
261.0	2.044	94.5	21.6	125.7	3.000	80.9	73.1	39.7
262.0	1.960	94.5	21.3	125.4	3.000	81.0	72.9	39.8
263.0	1.877	94.5	21.1	125.1	3.000	81.1	72.8	39.8
264.0	1.797	94.5	20.9	124.7	3.000	81.2	72.8	39.8
265.0	1.718	94.5	20.7	124.4	3.000	81.3	72.7	39.9
266.0	1.641	94.5	20.4	124.1	3.000	81.4	72.7	39.9
267.0	1.565	94.5	20.2	123.7	3.000	81.5	72.6	39.9
268.0	1.492	94.5	20.0	123.4	3.000	81.6	72.6	39.9
269.0	1.420	94.5	19.7	123.1	3.000	81.7	72.6	39.9
270.0	1.350	94.5	19.5	122.7	3.000	81.8	72.6	39.9
271.0	1.313	94.5	19.3	122.5	3.000	81.8	72.6	39.9
272.0	1.276	94.5	19.2	122.2	3.000	81.9	72.5	40.0
273.0	1.239	94.5	19.1	121.9	3.000	82.0	72.5	40.0
274.0	1.204	94.5	18.9	121.6	3.000	82.0	72.4	40.0
275.0	1.168	94.5	18.8	121.3	3.000	82.1	72.4	40.0
276.0	1.134	94.5	18.6	121.0	3.000	82.1	72.4	40.0
277.0	1.099	94.5	18.5	120.7	3.000	82.1	72.4	40.0
278.0	1.066	94.5	18.3	120.5	3.000	82.2	72.4	40.0
279.0	1.033	94.5	18.2	120.2	3.000	82.2	72.4	40.0
280.0	1.000	94.5	18.0	119.9	3.000	82.2	72.5	40.0
281.0	0.978	94.5	17.9	119.6	3.000	82.3	72.5	40.0
282.0	0.956	94.5	17.8	119.4	3.000	82.3	72.5	40.0
283.0	0.934	94.5	17.7	119.1	3.000	82.3	72.5	40.0
284.0	0.913	94.5	17.6	118.9	3.000	82.4	72.5	40.0
285.0	0.892	94.5	17.5	118.6	3.000	82.4	72.5	40.0
286.0	0.871	94.5	17.4	118.4	3.000	82.4	72.6	40.0
287.0	0.850	94.5	17.2	118.1	3.000	82.5	72.6	40.0
288.0	0.830	94.5	17.1	117.9	3.000	82.5	72.7	39.9
289.0	0.810	94.5	17.0	117.6	3.000	82.5	72.7	39.9
290.0	0.790	94.5	16.9	117.4	3.000	82.5	72.8	39.9
291.0	0.778	94.5	16.8	117.1	3.000	82.6	72.8	39.9
292.0	0.765	94.5	16.7	116.9	3.000	82.6	72.9	39.9
293.0	0.753	94.5	16.7	116.7	3.000	82.6	72.9	39.9
294.0	0.741	94.5	16.6	116.4	3.000	82.6	73.0	39.9
295.0	0.729	94.5	16.5	116.2	3.000	82.6	73.1	39.8
296.0	0.717	94.5	16.4	116.0	3.000	82.5	73.1	39.8
297.0	0.705	94.5	16.4	115.7	3.000	82.4	73.2	39.8
298.0	0.693	94.5	16.3	115.5	3.000	82.4	73.3	39.8
299.0	0.682	94.5	16.2	115.3	3.000	82.2	73.4	39.7
300.0	0.670	94.5	16.1	115.1	3.000	82.1	73.5	39.7
301.0	0.682	94.5	16.2	114.9	3.000	81.9	73.4	39.7
302.0	0.693	94.5	16.3	114.6	3.000	81.7	73.4	39.7

303.0	0.705	94.5	16.4	114.4	3.000	81.4	73.4	39.7
304.0	0.717	94.5	16.4	114.2	3.000	81.1	73.3	39.7
305.0	0.729	94.5	16.5	113.9	3.000	80.8	73.3	39.7
306.0	0.741	94.5	16.6	113.7	3.000	80.4	73.3	39.7
307.0	0.753	94.5	16.7	113.5	3.000	80.1	73.3	39.6
308.0	0.765	94.5	16.7	113.2	3.000	79.7	73.3	39.6
309.0	0.778	94.5	16.8	113.0	3.000	79.3	73.3	39.6
310.0	0.790	94.5	16.9	112.8	3.000	78.9	73.3	39.6
311.0	0.810	94.5	17.0	112.5	3.000	78.5	73.2	39.6
312.0	0.830	94.5	17.1	112.3	3.000	78.1	73.2	39.5
313.0	0.850	94.5	17.2	112.0	3.000	77.8	73.2	39.5
314.0	0.871	94.5	17.4	111.8	3.000	77.5	73.2	39.5
315.0	0.892	94.5	17.5	111.5	3.000	77.2	73.2	39.5
316.0	0.913	94.5	17.6	111.2	3.000	76.9	73.3	39.5
317.0	0.934	94.5	17.7	111.0	3.000	76.7	73.3	39.4
318.0	0.956	94.5	17.8	110.7	3.000	76.5	73.3	39.4
319.0	0.978	94.5	17.9	110.5	3.000	76.4	73.4	39.4
320.0	1.000	94.5	18.0	110.2	3.000	76.2	73.4	39.4
321.0	1.033	94.5	18.2	109.9	3.000	76.1	73.5	39.4
322.0	1.066	94.5	18.3	109.7	3.000	76.1	73.5	39.3
323.0	1.099	94.5	18.5	109.4	3.000	76.1	73.5	39.3
324.0	1.134	94.5	18.6	109.1	3.000	76.1	73.6	39.3
325.0	1.168	94.5	18.8	108.8	3.000	76.1	73.7	39.3
326.0	1.204	94.5	18.9	108.6	3.000	76.2	73.7	39.3
327.0	1.239	94.5	19.1	108.3	3.000	76.2	73.8	39.3
328.0	1.276	94.5	19.2	108.0	3.000	76.3	73.9	39.2
329.0	1.313	94.5	19.3	107.8	3.000	76.3	74.0	39.2
330.0	1.350	94.5	19.5	107.5	3.000	76.4	74.2	39.2
331.0	1.420	94.5	19.7	107.2	3.000	76.5	74.2	39.2
332.0	1.492	94.5	20.0	106.8	3.000	76.6	74.3	39.2
333.0	1.565	94.5	20.2	106.5	3.000	76.8	74.4	39.2
334.0	1.641	94.5	20.4	106.2	3.000	76.9	74.4	39.1
335.0	1.718	94.5	20.7	105.9	3.000	77.0	74.6	39.1
336.0	1.797	94.5	20.9	105.6	3.000	77.1	74.7	39.1
337.0	1.877	94.5	21.1	105.3	3.000	77.2	74.8	39.0
338.0	1.960	94.5	21.3	105.0	3.000	77.3	75.0	39.0
339.0	2.044	94.5	21.6	104.6	3.000	77.4	75.2	39.0
340.0	2.130	94.5	21.8	104.3	3.000	77.5	75.3	38.9
341.0	2.242	94.5	22.0	104.0	3.000	77.6	75.5	38.9
342.0	2.357	94.5	22.3	103.7	3.000	77.7	75.7	38.8
343.0	2.475	94.5	22.5	103.4	3.000	77.8	75.9	38.8
344.0	2.596	94.5	22.8	103.1	3.000	77.9	76.1	38.7
345.0	2.719	94.5	23.0	102.8	3.000	78.0	76.3	38.7
346.0	2.846	94.5	23.3	102.4	3.000	78.0	76.6	38.6
347.0	2.975	94.5	23.5	102.2	3.000	78.1	76.8	38.6
348.0	3.107	94.5	23.8	101.9	3.000	78.2	77.1	38.5
349.0	3.242	94.5	24.0	101.6	3.000	78.2	77.4	38.4
350.0	3.380	94.5	24.2	101.3	3.000	78.3	77.7	38.3
351.0	3.558	94.5	24.5	101.0	3.000	78.3	78.0	38.3
352.0	3.740	94.5	24.8	100.7	3.000	78.3	78.3	38.2
353.0	3.926	94.5	25.0	100.4	3.000	78.4	78.6	38.1
354.0	4.117	94.5	25.3	100.1	3.000	78.4	79.0	38.0
355.0	4.313	94.5	25.6	99.8	3.000	78.6	79.3	37.9
356.0	4.513	94.5	25.8	99.6	3.000	78.7	79.7	37.8
357.0	4.718	94.5	26.1	99.3	3.000	78.8	80.1	37.7
358.0	4.928	94.5	26.4	99.1	3.000	79.0	80.5	37.6
359.0	5.142	94.5	26.6	98.8	3.000	79.1	80.9	37.5
0.0	5.360	94.5	26.9	98.6	3.000	79.2	81.3	37.4
1.0	5.422	94.5	26.9	98.5	3.000	79.3	81.8	37.3
2.0	5.485	94.5	27.0	98.4	3.000	79.3	82.2	37.2

Exhibit #E9

CHANNEL-SIX EXHIBIT

Public Broadcasting Foundation of Northwest Ohio

January 1995

The proposed station is located 154.67 kilometers from the closest channel-six TV station, WLNSTV, East Lansing, Michigan. Under Section 73.525, the cutoff distance for FM stations on channel 220 is 154 kilometers, therefore no further consideration of protection to channel-six television need be given.

EXHIBIT # E10
R.F. RADIATION COMPLIANCE STATEMENT

Public Broadcasting Foundation of Northwest Ohio

Channel 220 - 6.0 kW DA
Defiance, Ohio

January 1995

Based on the formulas expressed in the OST Bulletin, No. 65, Oct. 1985, "Evaluating Compliance with F.C.C. Specified Guidelines for Human Exposure to Radio Frequency Radiation", published by the Federal Communication's Office of Science and Technology, the proposed facility is predicted to produce a worst case maximum R.F. non-ionization radiation level at a position six feet above the tower base (head level, without regard to the actual vertical elevation field toward the nadir which will cause a reduction in the predicted value) of 46.86 microwatts per square centimeter. This is 4.7 percent of the maximum A.N.S.I. standard for the frequency in use.

There are no other radiators on the proposed tower.

The applicant will protect workers on the tower by either reducing ERP or terminating transmission.

Consequently, the proposed FM station will be in compliance with the Commission's rules regarding exposure to workers or the general public to levels of radio frequency radiation in excess of the American National Standard Safety levels with respect to human exposure to radio frequency electromagnetic fields, 300 KHz to 100 GHz. (ANSI 95.1-1982)

Doug Vernier